SYNOPSIS

DOCUMENTATION AND CONTEMPORISATION: METAL EMBROIDERY OF RAJASTHAN

Submitted for the award of the degree of

Doctor of Philosophy

IN THE FACULTY OF ARTS & SOCIAL SCIENCES

THE IIS UNIVERSITY, JAIPUR

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April 2011

INTRODUCTION

Art is the product of man's natural admiration for beauty awakened by what he sees, feels and experiences. Art is amalgam of an artist and his creation and a blossoming of the soul. There are various forms of art that involve utilization of imagination and creativity. These forms require certain skills to create a so-called work of art. Music, literature, sculpture, architecture and painting are just a few of the forms of art that serve as an outlet for man to freely express his thoughts and emotions. Art can be seen in everything that man does, ranging from his everyday duties and tasks to complex art forms and fields. The clothing that man uses to protect himself from the effects of his environment can also be transformed into a work of art. Embroidery is the fascinating cloth art that involves the use of needles and thread. The earliest forms of embroidery that survived the tests of time were found in ancient Egypt.

Embroidery is the art of handicraft of decorating fabric or other material with design stitches in strands of threads or yarns using a needle. Embroidery may also incorporate other material such as metal strips, pearls, beads, quilts and sequins. It is an art rightly described as "painting by needle". It forms an art style of beautiful drawing, harmonious color, sprightly line and elaborate needle skill. Embroidery is an expression of self, rendered with patience, brilliance and dedicated hard work. According to Mary Norden “Embroidery encompasses many different types of fabric decoration, so beautiful and detailed that it is difficult to believe that a needle created them”.

Indian embroidery …. A craft that epitomizes the enchanting confluence of cultures in India.

Since the days of yore, this form of embellishments has threaded raiment with myth and lore, dazzling the eye with its mesmerizing beauty. Indian embroidery owes its amazing array to the resulting cross-fertilization of cultures. That is why, practically all stitches known the world are employed in India.

The origin of Indian textiles can be traced to the Indus valley civilization. The art of embroidery is clearly of the Eastern origin and is of such ancient lineage that our knowledge of it stretches

into pre-historic ages. The needlework tradition dates back to 2300 BC to 1500 BC and has been richly inherited by various regions, each having a special style and an individual inspiration. With the discovery of bronze needles at the site of Mohenjo-Daro (2500 BC to 1700 BC), it is evident that there was knowledge of needlecraft long ago. The Indian folk art and embroidery play an important role in creating many new designs. Moving to north India, embroidery is most prominently practiced by women. Mirror work over multicoloured thread embroidery is the contribution of western India. Indian embroidery and artistry has always been seducing people from different corners of the world, with its colours, individualities and ability to keep the gazers awestruck at the skill which has come down from one generation to the other without a loosening of the cords of tradition. India has long been known for its golden thread, zari and its various products (Crill, 1999).

Every region in india has its own distinctive style of embroidery, embodying its unique cultural essence. Delicately or densely patterned, with mutant or vibrant shades, these designs have universal appeal. No wonder then, that they have survived the onslaught of time. The ornate embroidery that once adorned royal robes, graced religious ceremonies or added colour to a paesant's hut, has effortlessly adapted itself to changing world scenario.

A ourney through the loops of Indian embroidery is a fascinating experience: the ethnic diversity of land unfolds before us as do the cultural affinities between different regions.Embroidery is passion in the state of Rajjasthan. As if to recompense for the arid regions, art forms are here imbubed with vibrant colour contrasts. Sparkling mirrors further enhance the stunning beauty of the floral and figurative designs. The craft of the thread pervades all aspects of lifehere, be it costumes, shoes or decorative items.

Embroideries of Rajasthan

Rajasthan is famous for its handicraft and art work. It has rich tradition and culture in its vast glorious history. Rajasthan is famous for metal embroidery work, embroidery work, wood carving, silver brass art work tie and dye and other various handicrafts. It is the color belt of

western India and ornamentation of gold and silver metal work embroidery on the clothing represents opulence, power and dignity. In Rajasthan, some form of embroidery invariably embellishes the three garments worn by women, the kanchli, ghaghra and odhni. Similarly men`s garments like the angarkha, achkan and jama also display certain elements of embroidery. It is also used to beautify the household items, like bedspreads, wall hangings and animal trappings. Where embroidery is done for domestic use, it is by custom a feminine occupation. Rajasthani men, traditionally, were involved in embroideries like zardozi and danka (Bhandari, 2004).

Embroidery of Rajasthan brings new character and dimension to any article that it graces. It is an ancient craft, which has changed over time to reflect the prevailing social, cultural and sometimes even the political mood of the times. The women are expert in this field and can make very attractive embroidery works on various clothes like quilts, skirts (gharries), shawls, bed covers and in many more others. A wide variety of techniques are used in the embroidery of costumes and textiles. Some of the popular styles are, among others, metal embroidery, gota work, and sufbharat. "The jewel in the crown" Rajasthan, brings everything at its most beautiful. Perhaps no other region of India is so thrilling, so colourful and so possesses more the traditional and picturesque.

METAL EMBROIDERY

Metal embroidery a popular embroidery style of Rajasthan, found its patron in royalty. They preferred gorgeous garments embroidered in gold and silver because the embroidery is auspicious and also it represents wealth, power and importance. The royalty was so patron of this style of ornamentation that they often employed it on a wide range of articles other than apparel, like footwear, belts, caps, cushion and even elephant caparisons and canopies.

The literature reveals that metal embroidery is of following type- zardozi, gota work, danke-ka – kaam and mukke-ka-kaam and aari tari. Gold and silver metallic threads are drawn through a series of dies to obtain a fine thread. This can either be hammered flat or used as it is. It can be

wound around a silken or cotton filament core to make it thread. Nowadays, electroplating with other metals also achieves similar effect.

ZARDOZI

Embroidery that uses pure gold and silver wire, zari is known as Zardozi and was, probably, derived from the Persian word zar, meaning gold. Zardozi work is also known as karchobi, which is derived from karchob. Jaipur, Ajmer, Tonk and Jodhpur are important centres for zari work in Rajasthan. Zardozi involves the use of gold threads, spangles, beads, seed pearls, wire, gota and kinari. The art of this embroidery is mostly passed on from father to son where certain skills are taught with utmost secrecy. The fabric on which the work has to be done is first mounted on a wooden frame called adda, which bears a close resemblance to the Indian charpai or bed. The chhapai or tracing of the design to be embroidered is then transferred on the fabric with neel or chalk powder. Then the article is embroidered.

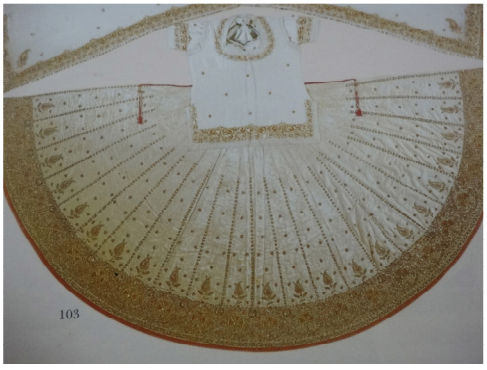
Gold wire is called zari, derived from zar, a Persian word for gold. The manufacture of zari is conveniently divided into several stages. The first stage is potai or pavthan, which involves bar making and wire drawing. The bars are called pasa. In the next process, tarkashi or Tania, the wires is drawn through series of plates, where in the final stage, diamond or ruby dies are used. The third and the last stage of wire drawing is the badla, the flattening process. The flattened wire or badla is the main variety of the drawn wire.But nowadays the embroiders have given the prevalent htreads a number of names, Sachcha kam refers to work with real gold zari, jhootha kam refers is the copper plated wire, while nakli kam refers to lurex wire or plastic is caaalled rangin kam

Dapka is a very detailed type of needle work. First a thick cotton cord is stitched on the pattern to be embroidered. Then on this cord prefabricated zari thread is looped on with an ordinary

stitching needle. The patterns mostly made are of flowers, leaves, or the national bird of India – the peacock (Kumar, 1999).

Salma or nakshi salma or nakshi is cheaper than dapka and considered slightly less exquisite than dapka. But a wedding skirt or lehanga or odhani or mantle cannot be complete without nakshi as it shines much more than dapka. Nakshi puts life in the art work. This form of embroidery is also done by using prefabricated golden thread on the chhapai. The work commences from exterior to interior that is the outline of the motif is worked with the twisted metallic wire gijai, followed by filling with twisted circular metallic wire, the Salma. For fixing the accessories, back, running, chain, couching stitching stitch is employed. Meenakari the enamel effect is bought about combining salma work with appliqué and other hand stitchery, which is an exclusive work of men folk. The motif's comprises of either floral or geometrical and are popular with distinctive names like ganga-jamuna(blend of gold and silver thread), jamavar(overall elaborate trellised pattern) bel(trellised border), hazarbutas (fine work with glittering thousands butties), kataokibel(scalloped trellis border)and so on (Naik,1996).

Stitches like laid stitch, back stitch, running stitch, couching, chain stitch, running stitch and satin stitch are also employed in these exquisite embroideries.



GOTA WORK

This style of embroidery starts with the Mughals and spreaded to the courts of Jaipur and Jodhpur. The metal embroidery of Rajasthan is known as Gota work. The embroiderers of Jaipur, Bikaner, Ajmer, Udaipur and Kota are world famous for their uniquely styled gota work. Gota is

a band of gold or silver ribbon of that varies with width, woven in a satin weave. The gold embroidery of Jaipur, known as gota-work, is intricate. In real gota, silver & gold metals are used. But in routine, the base metal is copper, coated by silver etc. Now the copper has been replaced by polyester film which is metalized & coated as per requirements. This has resulted in better quality at lower cost. The plastic gota (as it is popularly known) has good resistance to moisture and does not tarnish as compared to metal based gota. The raw material comprises of a yarn of silver polished with gold and passed under 10 calendars to make into fine strand called "Kasab" and further drawn under a calendar to give it a flattened effect known as "Badla". In recent years pure yarns are replaced by synthetic yarns. Various types of gota are sikhiyagota, chaumasa, panchmasa, athmasa, lappa, thappa, gokhru, lehrugotta, nakshi, bijbel, bijiya, chiru, kiran, chatai and chip gotta. The work was previously done on pure georgette, chiffon, velvet& silk whereas as in recent years synthetic fabrics are used for the production. The colors commonly used were red, orange, pink, magenta, maroon and yellow which are nowadays available in all possible shades as per the customer demand (Shrikant, 1998).

Production Process: The base fabric is tied on four sides with thick cords and is attached to a wooden frame known as Khaat. For tracing design the tracing paper is placed on the fabric. White paste made of safeda or chalk powder is spread over it, the design appears on the fabric. According to the outlines of the design gota is cut and folded into different shapes or it may be stitched in a simple line. To create different designs gota is cut and folded and is attached in various geometrical or in figured form with hemming and back stitch on the fabric Gota is woven on looms in Rajasthan and consists of a warp of cotton yarn and a weft of metal yarn. Attractive designs consisting of flowers, leaves and decorative motifs that could also be made on gota by pressing it under blocks. Each pattern and motif had its own distinguishing name. Small pieces of gota were cut and patched over the textile with the help of thread and needle to create designs in appliqué known as chatapati work. Other materials like dori, sitara, kundan are also used for artistic works. There is no better choice than ‘Gota Work’ when rich & heavy look is

desired in light weight. It is also low cost and durable. Small pieces of zari ribbon are applied onto the fabric with the edges sewn down to create elaborate patterns. Lengths of wide, golden ribbons are similarly stitched on the edges of the fabric to create an effect of gold zari work. The gota method is commonly used for women's formal costumes. Khandela in Shekhawati is best known for its manufacture. Kinari or edging refers to the art of fringed border decoration. It is usually practised by the Muslim craftsmen. Gota work is a form of fabric ornamentation that was probably originated in Rajasthan. It is also known as gota-kinari work and lappe-ka-kaam. These `Gota` and `Kinari` are golden and silver coloured pieces and laces those are sewn on the cloth. The Muslim craftsman generally prepares these. According to the width, gota work can be found under different names like chaumasiya and athmasiya. The work is done on the fabric with the appliqué technique. With hemming or simple running stitch the gota is attached in stylish design flow from the artisan`s fingers on to the garment.

The popular design elements like flowers, leaves, stylized mango motifs and heart shapes are usually worked on various kinds of odhna and ghaghras. Checkerboard patterns are also quite a favourite. Animal figures, like the parrot, peacock and elephant are some of the folk motifs. To get a variation, floral designs are cut from Gota and embroidered on to the cloth with the help of a string. Gota can be cut into small pieces and folded in the shape of leaves. They are also twisted and stitched on the cloth in the form of continuous triangles on the border. This work is mostly done is Jaipur in remote villages by local people called khandani karigars as inherited art. In Gota work however contrasting colors like pink and green or pink and red are mostly in the background with patch work to highlight the work. Some sections of the pattern are filled with colored satin, thus resulting in a rich design that resembles the enameled jewellery of the region. Men and women of all communities wear garments of Gota work or Lappekakaam, as it is auspicious and indispensable during ceremonial occasions. The work is mainly done on the costumes for women. Khandela in Shekhawati mainly prepares these items. Married women wear the Gota ornamented attire in religious, social and festive occasion’s men, and children also

dress sometimes in their finest clothes that are often ornamented with Gota work or Lappekakaam. Gota lacing is generally done on odhni and turban edges. Printed or embroidered ghaghras are also trimmed with gota. Traditional articles like kurti, kaanchli, sari, lehanga, poshaak, dress for idols are adorned with Gota work. Contemporary articles included kurtis, salwar suits and saris, decorative panels and cushion covers are also in fashion.

DANKE-KA-KAAM

Danke-ka-kaam is a speciality in terms of places like Udaipur. This craft is primarily distinguished by the use of small metallic square around which zardozi is done. The danka is a small square plate which is variable in size not bigger than 1.5cm. Although danka was originally made in gold, but nowadays silver plated with gold is also used (Mehta, 1994).

Previously, danka was also made with fine silver sheet, which was first warmed and then gold foil was applied to its surface and pressed. Nowadays, well finished, polished thin silver sheets of 98 percent purity are electroplated with gold strips of 30cm by 2.5cm. These are then washed in plain water and polished once again with granular sand. The strip is cut into 1.25 cm squares. The cost of the danka is calculated according to its weight (Mehta, 1994).

This decorative technique is usually worked on satin, chiffon or silk fabric. The fabric is tightly stretched on adda before it is embroidered. Danka pieces are laid out on the fabric as required by the design. The danka is pierce with the needle. About three to five strands of kasab are placed over danka and couched down along it edges. It is secured with 8 stitches in the shape of the knot (Bhandari, 2004)

Stitches employed include chain stitch, satin stitch for the design filling, while stem and running stitches are for lighter work. Motifs are mainly inspired by nature e.g paisley, sun and moon.

MUKKE-KA-KAAM: Mukke-ka-kaam, a type of embroidery in Rajasthan extensively uses the gold and silver threads to make the fabrics even more attractive. The gold and silver metal threads are known as mukke-ka-kaam that produces stunning embroideries that are used widely in Rajasthan. Mukka is the local name for metallic gold or silver thread that is wound around a core of cotton fibre. Both golden and silver mukka is used in this embroidery work. This style is mostly done in the Thar belt of Rajasthan, especially among the Sindhi Musalman and Meghval communities. The metal thread for Mukke-ka-kaam is doubled, laid on the fabric and couched down by stitching with another thread. The couching is skilfully executed so as to reveal the maximum surface area of the metallic yarn. In addition to coiling, various other stitches like the buttonhole and outline stitches are also used for filling in the designs. Motifs that were basically preferred are zigzag patterns of stars and triangles. The local name of motifs and design are derived from everyday objects like funi, patasha, chaukri, courtyard and daboo (Bhandari, 2004)

Aari Tari

In this work, metal ingots are melted and pressed through perforated steel sheets to convert into wires. They are then hammered to the required thinness. Plain wire is called badla, when wound round a thread, it is called kasav. Smaller spangles are called sitara and tiny dots made of badla are called mukaish. Aari work is a more delicate form of embroidery. It is done with both colored and golden thread. The thread is put on the tip of a pen-like needle which is passed through the cloth giving chain stitch-like impressions. This kind of embroidery is done by flat stitches on cotton stuffing and can be found on bridal and formal costumes. This is also seen on velvet coverings, curtains, tent hangings and the coverings of animal carts and temple chariots.

Documentation

The designer's role is to help research, analyse, categorize and document the craft tradition so that this knowledge will be protected and accessible. It can also involve reserving a way of life and attitudes in addition to a set of techniques passed down through the generations. Documenting a cultural heritage linked with a craft or a group of crafts is directly related to the preservation of tradition and traditional wisdom.

Documentation can also serve as a baseline for more proactive interaction and movement into the realm of regeneration/ revitalization. Thus, documentation as a form of intervention is not merely an academic exercise where the oral history of craft traditions is studied and recorded, rather, it is critical in preventing the irreparable loss that takes place when an oral tradition—or the practitioners of that tradition—fades away.

Design Development

Design has an important role in economic and social change that does not stop at creating a new or better product. Design plays an important role in encouraging environmentally sustainable and economically viable model of craft activity and help in the empowerment of marginalized groups, especially in cases where income generation, social mobilization and community rehabilitation is needed. Designers work as catalysts, whether intervening to involve hitherto excluded groups in craft activity, or in helping existing artisans deal with new clients through packaging, transportation, education and training.

The designer works for the motifs, designs and techniques to be documented and so that it is made accessible to more users. Most often, artisans cannot afford to maintain references close at hand and hence they have never seen what their forefathers used to make. Their databanks are in their minds and at their fingertips. There is real danger of motifs, designs and traditions dying out due to change, under use, or even the death of a specialized artisan or craft family/group. The fact that many craft traditions are oral traditions make documentation even more critical. In the absence of any documentation, oral traditions, once lost, can never be revived. It is a permanent loss. It cannot be overemphasized that for any design interaction to be effective, it is necessary to study the traditions and develop an understanding of the constraints and parameters within which artisans operate. There is an imperative need to research, analyse, categorize, and document craft traditions so that this knowledge will be accessible to a wider audience.

CAD plays an important role in designing. The conventional method of designing was tedious, time consuming and laborious. The entire process of designing is revolutionised where previously designer used to labour over graph paper. The modern technique aims at simulation of conceived designing onto the monitor and this help in better visualisation of wide spectrum of designs. The possibilities of designing are endless with the introduction of CAD. It plays a vital role in facilitating the creations of new designs and improving existing designs. Manual design

take more than 15 days, where as CAD system reduces the time to day or two(Vastrad & Naik, 2008)

Training

Increase knowledge of technical communication through a visual format to enhance issues related to precision and quality. Adoption of correct and effective methods helps to improve quality and consistency. Training will incorporate information- and technique based inputs concerning materials and processes to encourage adoption of appropriate methods for better results. It also seeks exposure and orientation to new markets where new products may be positioned. Training create better understanding and appreciation among artisans about specialized markets, products, processes, pricing, functionality, application potential, quality, product communication, consumer needs, industry, scales of production, etc. through first-hand exposure, hands-on training, and consistent dialogue during the process of product development.

OBJECTIVE OF THE STUDY

The main objectives of the study are:

1) To document the metal embroidery motifs of Zardozi, Gota work, Danke-Ka-Kaam, Mukke-ka-Kaam and Aari Tari

2) To study the production process, raw material, tools and techniques used in metal embroidery

3) Preparation of design directory of innovative designs with the help of Computer Aided Designing.

4) To create a range of products using combinations of metal embroideries and assessing its consumer acceptability

5) To impart training to the unemployed youth for their upliftment and skill development.

REVIEW OF LITERATURE

A review of literature is a systematic explicit and reproducible method for identifying and interpreting the existing body of recorded work produced by the researchers, scholars and practitioners. The objective of literature review is to identify the gap in the area; further research is being carried out to fill this gap. An ideal literature review goes beyond the stage of simplicity listing sources of to offer an analytical study on chosen area, through which the researcher can develop positioning, analysis and argument. An in- depth literature review facilitates in knowing the trend of the research already done in the specific area of interest and in streamlining the present plan of work. The investigator made a survey of literature in this field by reviewing pertinent research in this area.

History and different tools and techniques used in Metal Embroidery

Naik (1997) reported that ever since down of civilisation man has felt the urge to decorate the textiles by way of weaving, dyeing, printing and embroidery, creating designs on the loom was followed by embroidery. Embroidery is one of the oldest arts. The Bible is full of references to rich embroideries, the curtains of Jabernacle and the robes of the Jewish prints were said to be have been embroidered silks. The pomegranate mentioned in the bible was used as embroidered motif. The fruit with seed was symbolised life and immortality. It was from the Egyptians, Babylonians, and Persian that the Jews learnt this art. She further discussed that Greek, Egyptian and Roman embroideries often show fine strips of pure gold and other metal wound around the foundation thread of linen. These gold covered threads were touched to the surface of the fabric to cover certain areas in a solid gold effect or were used to outline colored silk, wool or linen embroidery. These are also rare examples of fabric which were used as wall hangings or to decorate fabrics.

Naik (1997) discussed the art of embroidery has evolved from the process of plain sewing. It is presumed that sewing was started by the prehistoric man when he joined together the leaves, grasses, flower to cover his body. The precise history of embroidery is obscure due to the perishable nature of textiles. But information regarding this art can be gathered from historical

records, statues paintings, archaeological findings etc. Fine bone needles, found on archaeological sites of upper Palaeolithic period were perhaps used for stitching garments made of skin but could have also been used embroidery as well.

According to Bhatnagar (2004) there is a fundamental unity not only in craftsmanship of stitch, but also in the choice of designs and the colours utilised. Each region naturally has out its own modes influenced by its particular environmental condition, customs and history. But all through there is a similarity in the use of the basic stitches like the satin, stem, chain, darning, running and herringbone, which have been used in multitude ways with varying inspiration to give each embroidered object a characteristic beauty.

Hackea, Carra & Brown (2004) elaborated that decorative metals have been incorporated into textiles for thousands of years, with an early reference found in the Old Testament, approximately 12th to 13th centuries BC. The earliest metal threads were thin strips of gold, which were cut from a beaten metal foil and directly woven or embroidered into textiles. Later these strips were wound around a fibrous core; this would introduce more flexibility to the thread and make its uses more versatile. The core fibres were usually silk dyed according to the colour of the metal wrapping, e.g. yellow or red for gold threads, undyed white silk for silver threads; though metal threads with a linen, cotton, animal hair or sinew core have also been reported (Braun-Ronsdorf 1961; Budney and Tweedle 1985; Indictor and Blair 1990; Skals 1991). Early metal threads were “beaten and cut”, where a single sided gilt block of silver or silver alloy was beaten into thin foils, cut into narrow strips and joined to filaments. Later the expansion of wire manufacturing encouraged the production of metal filaments; a cast silver or silver alloy rod was gilt and drawn through die holes of successively decreasing diameters. The wire was then flattened between rollers; hence “cast, drawn and rolled”. This produced a metal filament with double sided gilding.

Zardozi

In the 19th century, two distinct types of gold embroidery predominated, Zardozi work, heavy gold laid upon a ground of velvet or satin and kalabattu work, light delicate embroidery in gold and silver thread, wire and spangles upon fine silk, cotton or muslin. The latter was normally used upon dress pieces, but sometimes, in case of chop at game cloth, on small articles for personnel use (Irwin & Hall, 1973).

Zardozi is an elaborate work usually done on coats, household textiles like cushion , curtains, animals trapping, canopies, jackets, purses and so on. The ground material for zardozi is heavily silk velvet or satin which can hold the weight of the dense embroidery. Apart from zaribadla(thin metal strip) ,gijai(a thin stiff wire), sitara(A small piece appearing like a star), salma sea-pearls and also used. The wire is twisted into the required position with the left hand is sewn on the material with right hand.She further elaborated that kamdani is done on relatively light weight material small in size such as veils, scarves, caps, bonnets etc. The embroidery is done with double strand beginning with a knot. This knot also gives a beautiful glittering effect, when a small dots of overlapping satin stitches are mode on it(Naik,1996).

Harvey (1997) viewed that the metal thread embroidery zardozi was organised in workshop production the period of the Uzbek rulers in Bokhara, whereas areas of the city were given over to the guild workers who embellished the textiles of the emir's household. The embroiderers were men, as there was a superstition that women blackened the metal thread. They worked on a frame the metal thread was couched on to background fabric of fine wool, cotton, silk or velvet in elaborate designs. if the embroidery completely covered the fabric the work was known as Zaminduzi or if single motifs were scattered across it known as gulduzi.

Kumar (1999) stated that it is with the advent of the sultanate rule in India that we find the evidence of large scale production of zardoshi in the form of a state production craft. It is thought that the kharkhanas of the sultanate and mughal period which produces woven garments also produced luxury zardozi embroideries, often jewel encrusted Zarkas, a Persian word which refers to this craft, occurs frequently in literature of this period.She further describes that Futuhat-i-Firozshahi, the biography of FerozshahTugluq, is the first text in which the word zardoshi appears. During the reign of tiraz restriction was imposed on craft this caused gradual reduction in court patronage leading in decline of zardoshi. The craft received fresh impetus during mughal period. It increased in Akbar period but decreased in Auranzeb period.

According to her the woven fabrics were traditional favoured in Central Asia, the predeliction for sumptuous, clothing decorated with gold and silver may have initiated the demand for embroidered fabrics. It is presumed that the technique of gold thread embroidery (popularly known as Zardozi) was commonly applied in the sultanate period, though the exact nature of embellishment is not known. IbnBatuta mentions that silk robes with matching caps richly embroidered with karchobi were in the use which was often studded with stones. Most of their Tartar robes are embroidered with gold.

Bhatnagar (2004) reported that the craft of zardozi was patronised by the muslim rulers from the sultanate period onwards. Other religion Hindu and Jain influenced its design expanse. The crafts therefore reflected the tastes and preferences fashion and requirements of the elite pockets of various religion sects the design were based on the typical taste of the groups of patrons, there were variations in form and styles. These designs have been influenced from time to time by the main cultural streams and have a variety of floral motifs. The designs are border designs, central designs, buti and buta.

Gupta(1996), has discussed that there are two broad techniques of zardozi work. These are

karchobi and kamdani. Karchobi style have been developed under the Portuguese influence, was suitable for furnishing and accessories. The broad category of these items included tent hangings, cover, spreads, trappings, umbrella, parasols etc. The fabric was generally velvet or heavy satin with lining support underneath. The Kamdani technique on the other hand was more magnificently practiced on finer fabrics such as muslin, silk etc. which were more suitable for costumes and related accessories such as caps, shoes belts, purses, fans , jewellery etc. Apart from these several decorative items different religious manifestations also had zardozi work

Surat is the home of zari industry in India. It makes embroidery materials for machine and hand embroidery vizzari thread / kesab, nakshi, salmo, sadi, kangri and badle. Woven trimmings, flat trimmings, metallic trimmings, fringes, metallic fringes in different colour and different widths are made. Sequin collar and motifs in elegant colours and designs are also made. These enhance the beauty of garments. Accessories are also made for a variety of uses(Kundu, 2007).

Gota Work

Singh (1979) quoted that the pagari displayed in the gallery of M.S Mansingh II Museum are tied in characteristic Jaipur style Khuntedar. They have gota and pallu on them. In the second Quarter of the present century during the reign of M.S. Mansingh II they wore flat turbans known as Jaipur Shahi. The Maharaja wore a turban always with gota and badla, others had gota on festival.

Kumar (1999) reported that the voluminous jama at City Palace Museum was worn by Maharaja Pratap Singh (1778-1803) for his wedding and was a gift from Takooji, the Maratha King. It is made of fine muslin coloured with rust vegetables dye and hand woven. The skirt is edged with a band of gota which finished gotamoti.She also reveal that 12 piece collection to make up jama, one of the earliest fabric of Jaipur City Palace Museum dated early18th century, was made in royal karkhana. The trellis pattern around the butis is embroidered with flat gold badla. The butis are made up of cut pieces of gota outlined and highlighted with gold dori. The base of each flower has a bottle wing switched on it and the petals emerald green and russet silk threads

resulting in pietra- dura effect.

Bhandari (2004) reported that depending on the width ,gota can be found under different names, such as chaumasiya and athmasiya. Essentially, gota is a strip of gold or silver ribbon of varying width, woven in satin weave. Badla, a metal yarn made of beaten gold or silver, forms the weft and silk or cotton is used in the warp. She further discussed that the popular designs elements like flowers, leaves, stylized mangoes, chekerboard pattern, parrot, peacock, heart shaped and elephant motifs are usually worked on odhana and ghagras.

Shrikant (2009) discusses in her book that the colour used in gota craft have it own significance and connotation. Gold is associated with sun and goddess lakshmi and silver denotes moon and it's light.

Danka- Ka- Kaam

Vyas (1987) found that danka work practitioners (Bohra community) economically strong people who believe in Shia religion situated in the Mewar state. During the rule of Rana Sajjan Singh, a strike held by the businessmen of Udaipur, which was not supported by the Bohra community. Thus, the emperor had given all the promotional facilities to the Bohra community in the state. The Bohra community were engaged in doing Danka and zari work on sarees and costumes for elite class and rulers of Udaipur.

Mathur (1994) quoted that the emperors of Mewar used to decorate their garments with gold and silver embroidery to enhance the richness of their wearing apparel used on auspicious occasions, festivals and ceremonies. The designs for embroidery were mainly floral with leaves, petals and flowers. The range of articles other than a wearing apparel were very wide and in spite of the high cost, it was also used for decorative footwear, cushions, belts, caps, canopies, hooks, etc. leather, velvet, silk and cotton were used for embroidery.

According to Mehta (1994) danka was also made with superior silver sheets, which was first warmed and then gold foil that was applied to its surface and pressed. Of late, well finished polished thin silver sheets of 98% purity are electroplated with gold in strips. The cost of Danka product is calculated according to its weight. The manufacture of the gold and silver wire or thread used in the embroidery is a minor industry. A bar of silver about 45 cms in length and roughly 2 cms in thickness is completely wrapped around with pure gold leaf and then heated in furnace sufficiently to fuse the gold. Gold and silver embroidery is invariably done with the cloth stretched on wooden frame.

Babel and Kaur (2010) found that the traditional Danka work of Mewar (Rajasthan) is lesser known as zarir work, mainly done on Rajput women's costume. The Indian folk art and embroidery play an important role in creating new designs. Moving to the north India, the embroidery most prominently is practiced by the women. Indian embroiders and artistry has always been seducing people from different corners of the world with its colors individualities and ability to the gazers awestruck at the skill which have been passed through generation without breaking the cords of tradition. India has long been known for its golden thread, zari and its various products. Danka work is done on bright colored fabric by the use of gold and silver metal leaf plated with gold.

Mukke-Ka Kaam

Bhandari (2004) quoted that at the time of marriage of Sindhi- Musalman, a kanchli of red bandhej with orange and white dots is preferred. This kanchli is embroidered with black and ornamented with gold and silver mukka and pukka work, inset with mirrors.

Developing new design through Computer Aided Designing

Computer Aided Textile Designing is the hope and anticipation of today's era. Computers have helped to carry on the work easily and in a short duration, maximum number of assignments can

be fulfilled leading towards profit of the company. Hence, it was felt necessary to collect information about CAD in Textiles from some of the reviews listed below:

Bains and Bhatti (2001) developed software for Phulkari design under Microsoft Disk Operating System (MS-DOS). The basic statements used in MS-DOS were arithmetic operators, DIM, read, for-to, go-to, go subroutine, if-then-else, input, locate, loops, print, read, return and end statements. The software developed provided immediate visualization of the results of any design on the monitor and any detailed alterations could be done in minutes. The simulation involved also provided an additional advantage of checking out the suitability of designs on computer screens for commercial production.

According to Yadav et al. (2006) computer is one of the important tools for Apparel designing. Advanced computer systems of 2 or 3 dimensional concept designs are used widely in developed countries. A number of software are used in apparel designing such as CorelDraw, adobe Illustrator, Karat cad here as TUKA CAD concentrated on the practical use of Computers in pattern design and product development as stated by Development of new designs

Namrata (2006) in her research work reported that now a day, CAD in every field is hastening the work efficiency and assisting to introduce variety in colours, designs and textiles of fabrics. It is possible to produce a single design with several colour combinations either changing the background or colour of the pattern to attract the buyers and know the trend of colour combination. Colourway is nothing but showing a pattern or a background in different colour combinations. Thus, in her study, the researcher made an effort to produce the prototype diwan sets in different colourways. Here the background colour was changed from creamish (gray sheeting material) to lighter hues of blue, red and yellow, keeping the colour and pattern of khana fabric same. The surface embellishments and special features used to contemporize diwan

sets were also kept constant. The graphics of diwan sets were scaled using CorelDraw version 11 and the khana material was scanned on HP scanner, copied, pasted on the graphics of diwan sets.

Sharma, Sharma & Subhedar (2007) reported in their article "Putting ICTs In the Hands of the Women of Kanpur and the Chikan Embroidery Workers Lucknow" that the project was established in community multimedia centres (CMCs) in Lucknow–Kanpur area to impart training in IT, handicrafts and other traditional vocations in addition to providing information on health, education, and women's empowerment. The project included computers with Internet access, high-speed printers, and scanners to enhance both the vocational and basic ICT skills of the disadvantaged and marginalized Kanpur–Lucknow women. Participants were assigned to Self-Help Groups (SHGs), and the SHGs were trained using the Microsoft Unlimited Potential curriculum in addition to ICT-based vocational and skills-based modules. Furthermore, basic skills such as tailoring, embroidery, and handicrafts were reinforced with the help of ICT modules. To support the women's creation of chikan embroidery designs.

Naik & Vastrad (2008) reported in their study that hand embroidery has importance and sanctity of its own. The traditional Karnataka Kasuti is elaborate, requires skill and hence works out to be more costly. In today's fast changing fashion, traditionally being the fame and interest of the elite in society, people are ready to spend. Hence, this elaborate embroidery is more suitable for the traditional and expensive silk saris, which surely enhance and restore the tradition. On the other hand, negikasuti motifs would go unseen and may gradually become extinct, unless efforts are made to revive it. Hence this technology of computerising negi motifs and incorporation through jacquard on the handloom hastened the production process and thus made traditionally available for women consumers of all income groups.

Jyoti and Grover (2009) viewed that Computer Aided Designing is gradually taking momentum in the era of textile designing. The conventional method of designing was tedious, time consuming and laborious. The researcher in their study "Designing and printing of bed cover

using CAD technology" has developed the design for screen printing of bedcover using Corel Draw and Photoshop software by analysing and rearranging the motifs.

Product development and Marketing Potential

For developing any new product, there is a series of steps which typically occur to facilitate the product creation (Hatcher, 2004). The process typically begins when there is a need for a new product or product range. Initiating factors that can facilitate the need for new product development are "financial goals, sales growth, competitive position, product life cycle, technology, globalization, regulation, material costs, inventions, demographics, lifestyle changes, customer requests, supplier initiatives and alliances" (Urban and Hauser, 1993). In terms of printed apparel, new products are typically created as components of a product range, also known as a line or collection, as opposed to independently as individual products.

Babel and Sodha (2007) concluded in a article on market potentials of value added articles made by jute fabric and phulkari embroidery that minimum 20 percent can be gained by development of value article.

Chatterjee et al (2007) in their article "Designing Handicrafts using Information Communication Technology" quoted that product innovation and improvements in design as well as manufacturing technologies in the formal sector of occurs on a routine basis. In the case of the informal sector, the concept of product innovation remains subdued. With an introduction of modern technologies of design and product innovation, the change is necessary in informal sector so that the economy can be uplifted. In particular, the textile sector in India presents an appropriate case for introducing the tools of design and product development. It is felt that the textile handicraft sector will be benefited if such tools and products are available at an appropriate price. In order to overcome the cultural inertia of change, it is necessary to provide an appropriate environment of training and education. Since the economic size of this sector is large, any effort in the direction of technology improvement will yield significant dividends.

Babel and kaur (2010) reports in her study "Market Potential value added Danka work shawls" that majority of the experts appreciated the efforts made by researcher in developing Value added shawl design. Further the judges opined that the motifs developed were very innovative and creative. Thus it was suggested from the present study that traditional danka work can be useful as self employment project by using them in making different design shawls for sale through boutiques or retailers and also a good boost for creativity.

Training to artisans for earning

Liebl and Roy (2000) stated that crafts producers who have lost their traditional markets often are not aware of potential new markets for their products, in urban India and abroad. The low level of education and rural orientation of the majority of craftspeople leave them vulnerable to exploitation by all those middlemen who are their only means of access to distant markets. When they do have the opportunity to interact directly with a buyer, the problems multiply. The essentially agrarian, rural world- view of the producer does not mesh easily with the exacting demands of the international market, and experiments in direct market access often end in total failure. Crafts producers suffer greatly from lack of working capital and access to credit and loan facilities. The producer who receives a large order will often not be able to find the funds necessary to purchase raw material in bulk, or to support the family while the work is in process. And the irony is that the amounts that could make a real difference to the crafts producer are often extremely modest. Various credit schemes are available to craftspeople, primarily through government institutions, but it is difficult for the uneducated artisan to understand and access these programs, and it is often impossible for a poor craftsperson to manage the necessary collateral or funds for required bribes.

Tyabji (2005) reported that when they first started Dastakar: A Design Intervention with chikan Embroidery with the Self- Employed Women's Association in Lucknow in 1986, the average wage paid for the embroidery in the chowk was Rs 2.5 to Rs 5 per kurta and Rs 25 for sari. But

after 5 years SEWA women earn between ten to twenty times that much, depending on the quality of embroidery. The wheel has turned full circle. Whereas formerly every woman wanted to join SEWA office on stipend, today most women say they prefer embroidery as a mere flexible, creative and lucrative form of earning of the living. It is exactly twenty years since S E W A Lucknow first started, famously 'with twelve women, one tin trunk and ten thousand rupees'. Dastkar began its design and marketing intervention with them a year later. By then, the group consisted of a hundred or so women. In the interim years, S E W ALucknow hasgrown to an ever increasing number of 7,500 w o m e n and their annual turnover is incrores. It still continues to be both a major centre of chikan production and marketing,as well as a catalyst for social development and women's empowerment.

Bhagat, Rai, and Manjari (2005) stated that the NGO has given design intervention in the revival of a languishing craft: The embroidered art of the Chamba rumal. Delhi Craft Council is re-examining their marketing strategy to identify new markets and new methods of distribution for the rumals. They plan to organize exhibitions outside the country as well as promote the artistic, social, and cultural worth of the exclusive art of Chamba rumal embroidery.

Kundu (2007) in his article quoted that the handicrafts sector is one of the most vital sectors of our economy, both for generating employment as well as earning foreign exchange for the country. Zari& embroidery cluster is also an important part of this sector. It is not only highly labour intensive but decentralized, having a spread all over the country in the rural & urban areas. It sustains weaker section of the society, including women.

Deo (2010) reported that after giving a training for six month on handloom weaving to the thirty artisans , the result showed that that the 86.66% of the trainees were found in the medium level of adoption after the training, 3.33% were found in low level of adoption and 10% of the respondent had high level of adoption. It suggested that the training had positive impact on the respondent. Although all the respondent reported and showed interest to form Self Help Group to

start their own weaving unit but they found difficulties in how to start business. These training can play a key role in generating employment opportunities for rural youth in local areas.

RATIONALE OF THE STUDY

India has rich cultural heritage most of which is very less explored and known. This is an attempt to explore the traditional embroideries of Rajasthan and develop contemporary designs from them to suit the consumer needs of the present market. Rajasthan has a rich heritage of different types of metal embroideries. These embroideries are used exclusively to create various articles as per the demand but have not been used together in a single product. The new design developed in the research will be a combination of two metal embroideries to form a different and unique product which will give a new touch to the tradition.

Traditionally, India has maintained its reputation as a manufacturer and supplier of embroidered textile to world market. Textiles of Rajasthan have a pride place in most of the sophisticated western market from the ancient times. They have gained a commendable place both in domestic as well as international sectors, thereby earning the much required foreign exchange and also giving employment to large number of people.

The development of traditional textiles is as essential and important as any other fields. Indian culture and its rich heritage are reflected in costumes and embroideries of various regions of the country. The Indian traditional embroideries play an important role in the world of fashion. Embroideries everywhere have been fascinated with different designs. But only its natural form that embroiders love is beauty in their stitches. Today designers and artist picks up motifs from traditional designs and incorporate them in weaves, embroideries and color ways based on market demand. However, there is no doubt that stylized version of ancient designs enjoying new impetus with an ever increasing demand for traditional forms. These days fashion trends are fragile and consumer constantly demands innovative design over existing fashion fields.

Today is the world of modernization and industrialization. The conventional method of designing is tedious, time consuming and laborious. CAD plays an important role in designing.

The entire process of designing is revolutionised by eliminating manual designs. The modern technique aims at simulation of conceived designing onto the monitor and this help in better visualisation of wide spectrum of designs. It plays a vital role in facilitating the creations of new designs and improving existing designs. The new design directory of motifs of metal embroidery which will be created with the help of CAD will be beneficiary to the artisans, designers and people associated in the field of Fashion & Textile. In the present study, attempt has been made to develop product range in metal work embroidery. The study is aimed to explore the possibilities of maintaining and promoting the traditional art of metal work embroidery. Attempts have also been made to create an opportunity for the domestic. Due to rising unemployment situation, training schemes for unemployed youth will be fruitful. Value addition of the product with the help of metal embroidery would help rural unemployed to start their work, earn money, and improve their livelihood. It will generate employment opportunities for better standard of living. By developing new products and exploring market potentials of the people can stay at home and do the work there itself instead of going elsewhere in search of employment. It will also save the traditional art, which is at present in its endangered condition as the art is not being transferred to the coming generations

METHODOLOGY

Methodology is a scientific way of conducting any research as far as that study is reliable and conducted with accuracy. Keeping this in mind the researcher will try to document the traditional motif of metal embroidery and create new stylized motifs and designs with the help of Computer Aided Designing. These designs can be arranged as a catalogue of design.

Tracing the objectives of the present study the following methodology sets forth the methods and procedure which will be undertaken for collection and analysis of data. The study will be carried out in the following phases-

Phase I Documentation

Exploring the tools and techniques used in metal embroidery

Phase II Design Development

Product Development

Phase III Training

Phase I

Documentation:

6) **Collection of Study Material:** In order to document the motifs Zardozi, Gota Work, Danke-Ka-Kaam, Mukke-ka-Kaam and Aari Tari, museum and the reserve collections will be used as reliable databanks. The museum located in Rajasthan will be visited to document the motifs. Books, catalogues, magazines will be used as source of documentation.

Tools and technique used in metal embroidery

Locale of the study: The data base for the study is very vast, and therefore both extensive and intensive modes of research will be utilised. The investigator would cover the various metal work embroideries in keeping with the region of their prevalence in:

Zardozi: Jaipur, Ajmer (Bhandari 2004); Danke Ka Kaam: Udaipur (Mehta 1994);

Gota Work: Jaipur, Bikaner, Ajmer, Udaipur and Kota (Shrikant 1998); Mukke Ka Kaam: Jodhpur (Bhandari 2004); Aari Tari: Jaipur(www.wikipedia.com)

Selection of sample: The units will be approached randomly in all the places where the embroidery is done. Approximately 50 units will be selected to explore the tools & techniques, working condition of artisans and problems faced by the artisans. The artisans who have work experience of 10-15 yrs, and belong to age group 45- 60 yrs will be approached for the interview as they will have the in-depth knowledge about the metal embroidery.

Selection method: For the conduction of the study the data will be collected by an interview schedule. The particular method will be adopted because of the advantage of flexibility over other methods of data collection which will give the respondent an opportunity for clarification in case of doubt. Further, it can allow the interviewer to ask follow up questions.

Framing the interview schedule: The interview schedule will be prepared with an object to get an idea about the tools and techniques used in metal embroidery. Preliminary survey will also be conducted to standardize the schedule. In order to gather information related to raw material, tools, equipment and techniques used in

metal embroidery an interview schedule with the artisans will be used. The tool will consist of close ended question to collect the desired information on various aspects:

- Sources of procuring raw material and embellishment
- Most prevalent motifs in use
- Fabric used
- Embroidery frame
- Materials used in making of metal embroidery
- Needles used in making metal embroidery
- Stitches used in making metal embroidery
- Working Conditions
- Problems faced by artisans

The demographic variables of artisans will also be studied.

Analysis of data: For the analysis of data, the following steps will be under taken-

a) Coding: The data from the interview schedule will be transferred to the coding sheet by assigning numerals to responses. This facilitates tabulation and analysis of data.

b) Tabulation: The data will be transferred to the coding sheet. Tabulation will be done to arrange the data in the form of tables.

c) Analysis: Collected data will be analysed to express the complex and scattered information into simple, clear and logical data which will reflect the frequency and percentage of the data.

Phase II

Design Development

Creation of Motifs: CAD has not only expanded the horizon of designing but also created the facility to craft any number of designs that could be saved in the library to apply, as and when required. CAD system is more advantageous with respect to speed, pattern creation, editing, repeating, flexibility, variety, color-ways and cost effectiveness. A catalogue of innovative designs will be created through CAD using combinations of metal embroidery. To begin with, the traditional motif is defined as as one which passes from generations and is inspired by the flora and fauna of nature. Its characteristics are flowing and rhythmic lines and intricate, decorative shapes. The traditional design of India can be further classified into paisley, ogee, grapevine, centreline, butis, jaal and border (Betala 2005). Atleast 10 motifs each of Zardozi, Gota work, Danke-ka-Kaam, Mukke-Ka-Kaam and Aari Tari will be contemporarised through CAD (Computer Aided Designing).

Evaluation: The developed motif will be evaluated by the panel of judges through ranking scales and the best five motifs will be selected for designing. The panel of judges will consists of five fashion designers, 5 textile designers and 5 experts.

Ranking: For evaluation of motifs, a ranking scale will be used. Each motif will be rated on its suitability through a five point rating scale. The rank will be assigned as follows:

Excellent -5, Very good-4, Good-3, Fair-2, Poor-1

Layout and variation of designs: The selected designs will be prepared for the corner design, centre design, allover and border design through CAD. Five designs for each will be developed.

The twenty new designs will be evaluated by the same panel of judges consisting of the fashion designer, textile designer and experts. The best design will be used for the product development through combination of metal embroidery.

Product Development

Out of the previously selected twenty designs, ten best designs will be applied used for product development through combination of various metal embroideries.

Combination of Metal embroidery

Embroidery	Code	Comb 1	Comb 2	Comb 3	Comb 4
Zardozi	D1	D1D2	D1D3	D1D4	D1D5
Danke-Ka-Kaam	D2	D2D3	D2D4	D2D5	------
Gota work	D3	D3D4	D3D5	--------	-------
Mukke-ka-Kaam	D4	D4D5	-------	-------	-------
Aari Tari	D5	--------	------	-----	-------

Stoles will be prepared through combination of metal embroidery. Following process will carried out for preparing of stoles, embellished by combination of metal embroidery:

a) Designing
b) Tracing
c) Setting of the Frame (Adda)
d) Embroidery

Evaluating the Acceptability: The developed products will be evaluated again for its acceptability by a panel of judges, comprising five marketing personnel, five consumers and five designers. Responses and preference for the product will be recorded carefully.

Following criteria will be followed for the acceptability of the product:

- Suitability of fabric
- Placement of motif
- Colour combinations
- Combination of work
- Overall appearance
- Serviceability
- Cost of the product

Acceptability Index

To assess the percentage acceptability of the product an acceptability index will be used. The formula is as follows-

$$\text{Acceptability Index} = \frac{\text{Maximum accepting frequency of design}}{\text{Total Scores}} \times 100$$

Phase III

Training

A short term training of three months will be given to 25 youths belonging to age group of 18-25 years. The trainees who are interested in learning of the art will be approached to produce a diversified range of products. The above age group is chosen as they are more open to new variations and can carry the art forward. The youth will be approached through a Self Help Group. Care will be taken to only include those craftsmen who

exhibit an interest and primary knowledge of the subject. To study the effectiveness of training, the pre and post evaluation of the research design will be conducted.

A pre-test will be done for assessing the ability of the artisan to create the embroidery.

They will prepare the sample and then they will be evaluated according to the following criteria:

- Highly skilled
- Semi-skilled
- Unskilled

Training will be imparted to the artisans for a period of 3 months. In the training they will be taught to:

- Transfer the design on to the fabric
- Techniques of doing metal embroidery
- Developing the articles

A post test will be conducted to assess the capability of the artisans to prepare the product. The following parameter will be used;

- Highly developed
- Partly developed
- Least developed

A suitable statistical test will be used to analyse the data. Finally, the articles will be exhibited for the promotion of the product.

SCOPE OF THE STUDY

1. The project will serve as a guideline of experimentation on the metal embroidery of Rajasthan for upcoming designers, students and fashion innovators.
2. The documentation of the embroidery will be helpful for the coming generation as it throws light on the aesthetic sense and intricacy, which are an integral part of the craft.
3. Innovation and fusion regarding combination of metal embroidery and developing product range.
4. This study will be helpful for those people who want to get involved in the trade and also for those who are already in it.
5. This type of study can be conducted on various other ancient embroideries by changing its outlook or its original form.

CONCLUSION

In today's world of modernization and industrialization fashion is changing rapidly, therefore innovative changes and new designs are in great demand. Current trends are propelling people towards the ancient and traditional art and designs. True art is judged in terms of expression of deep inner feeling. However, in real terms any form of art remains meaningless until and unless it is accepted by the society. The form of embroideries has been prevailing throughout the centuries. The exploration and documentation of rich traditional embroidery of Rajasthan will give a new way to discover contemporaries to the designs which are already in the rich Indian cultural heritage. In times to come there would be a great demand for this embroidery. There is certainly a great demand for hand work. It is aptly remarked by one of the philosopher "That art is the best representation of its own time". However, it is a fair agreement that art form have been changing continuously from time to time. Of course new art will give new life to the already popular mode of designing all over the world.

It would not be wrong to conclude that such a study would definitely help to preserve the traditional embroidery of Rajasthan along with contemporisation of the art. The creation of designs and motifs can be successfully incorporated in the field of textile and fashion. Such studies would further help to popularize and inspire others to preserve the traditional, cultural and aesthetic skills. Due to the rising unemployment situation, training schemes for unemployed youth will be fruitful. Value addition of the product with the help of metal embroidery would help the rural unemployed to start their own work, earn money, and improve their livelihood. It will generate employment opportunities and lead to better standards of living. It will also save the traditional art, which is at present in its endangered condition as the art is not being transferred to the coming generations

Limitation of the study

1) Embroideries are restricted to metal embroidery of Rajasthan.

2) The survey will be limited to 50 units.

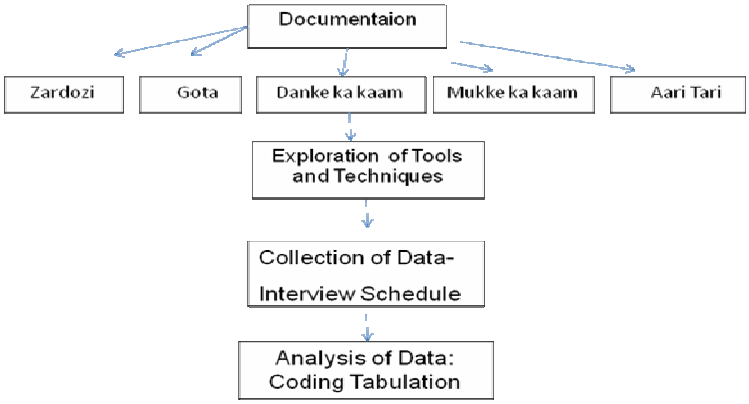
3) Designing work will be done only through CAD.

4) The development of product range has been limited to one product i.e. stole.

5) Imitation work on the product will be used as opposed to pure metal embroidery.

Research Plan

PHASE I DOCUMENTATION



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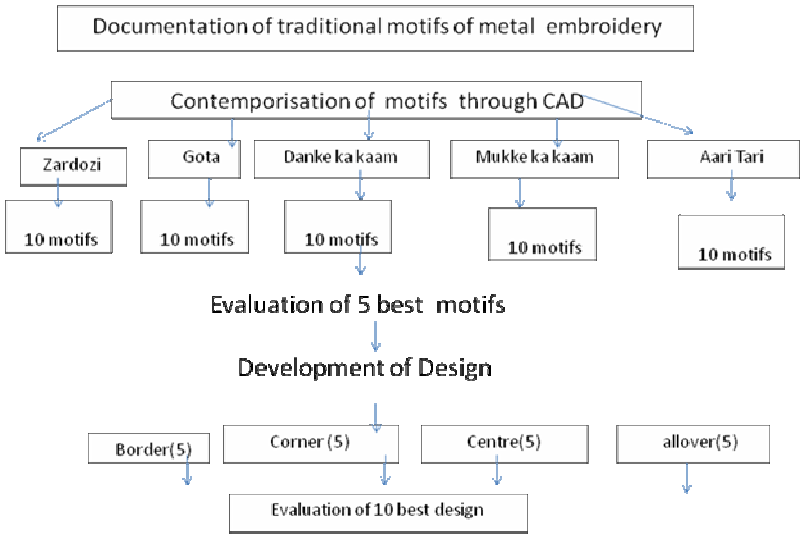
PHASE II DESIGN DEVELOPMENT



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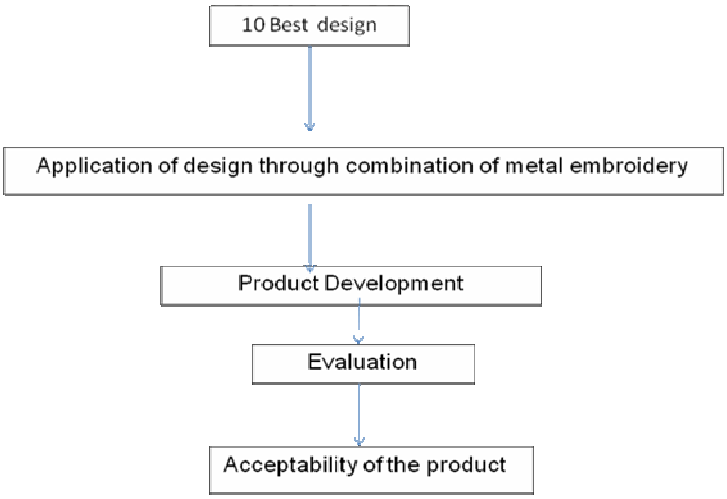
PHASE II PRODUCT DEVELOPMENT



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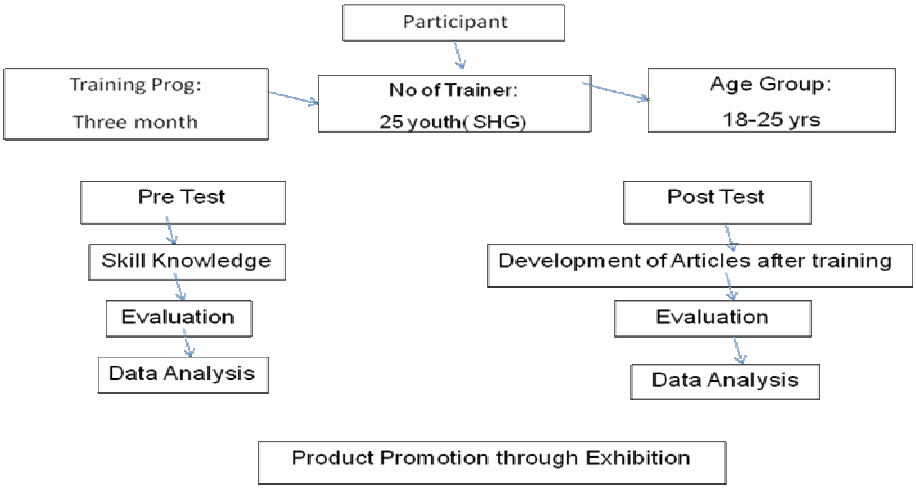
PHASE III TRAINING



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TIME PLAN

S.No	Activities	Time Duration
1.	Documentation	4 Months
2.	Exploration of tools & Technique	6 Months
3.	Design Development	3 Months
4.	Product Development	3 Months
5.	Training	3 Months
6.	Report writing	2 Months

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